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13. ABSTRACT *(Maximum 200 words)*

The purpose of this research is to develop a diverse family of optical devices for measuring optical properties of the free troposphere and obtain data sets to study these properties. Efforts to design and construct several components of an aerosol calibration system were completed. A series of preliminary field measurements using these new components was completed and the results were favorable. The effort of work under this EPSCOR grant has had a significant impact on the parent grant.

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The purpose of this research is to develop a diverse family of optical devices for measuring optical properties of the free troposphere and obtain data sets to study these properties. Efforts to design and construct several components of an aerosol calibration system were completed. A series of preliminary field measurements using these new components was completed and the results were favorable. The effort of work under this EPSCoR grant has had a significant impact on the parent grant.

FIRST ANNUAL TECHNICAL REPORT
EPSCoR AUGMENTATION GRANT NO. F49620-92-J-0427

Period coveried: 1 August 1992 to 31 July 1993

In the Fall of 1992 one full time EPSCoR graduate student (Micheal Bjelland) began conducting research associated with the parent grant. This student successfully designed and constructed several components for a badly needed aerosol calibration system. Subsequently he preformed a series of preliminary field measurements utilizing newly constructed and calibrated instruments. The results were important to the successful progression of the parent grant. In the Spring of 1993, it was apparent that the student's academic grades were not sufficiently high for him to continue to receive the privilege of EPSCoR support. Another graduate student with a very high academic record (Richard Lee, also U.S. citizen, born in the U.S.) was then put on the EPSCoR support and subsequently made excellent progress in continuing the research.

A more complete description of the technical progress achieved in this work has been submitted in quarterly progress and annual reports to the parent grant scientific program officer.

The addition of a graduate student researcher provided by the EPSCoR award has had a tremendous positive impact on the parent grant research. Needless to say, the research itself is providing valuable student experiences that otherwise may not be available at the University of Wyoming. The EPSCoR support is highly appreciated.

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